

What is Claimed:

- 1 1. A motor protector comprising
- 2 a housing member having a bottom wall, a sidewall extending
- 3 upwardly from the bottom wall defining an open end and a switch chamber, the
- 4 sidewall having a free end formed with a laterally, outwardly extending flange
- 5 having portions on at least two opposite sides of the open end,
- 6 a thermostatic switch having a movable contact received in the switch
- 7 chamber electrically connected to the housing member,
- 8 a gasket received on the flange and having an opening aligned with
- 9 the open end of the housing member,
- 10 a lid having first and second spaced apart parts, each lid part having
- 11 two opposite sides formed with tabs receivable over flange portions of the
- 12 housing and the gasket and being clamped to the flange portions through the
- 13 gasket, each lid part having a face surface received on the gasket covered flange
- 14 portions and a recessed contact shelf disposed within the switch chamber when
- 15 the lid is disposed on the gasket covered flange, the shelves being in alignment
- 16 with and facing each other forming a ceramic substrate seat, and the first lid part
- 17 having a stationary contact portion and the movable contact being movable into
- 18 and out of electrical engagement with the stationary contact portion,
- 19 a ceramic substrate formed with opposite first and second face
- 20 surfaces and opposite end portions, an electrical contact surface formed at each
- 21 end on the first face surface of the substrate and electrical resistance material
- 22 disposed on the first face surface between and in electrical connection with the
- 23 contact surface at each end on the first face surface, the contact surfaces of the
- 24 ceramic substrate received on a respective contact shelf, and
- 25 a spring clip attached to the housing member for applying contact
- 26 force through the ceramic substrate to the contact shelves,
- 27 the ceramic substrate being disposed in the switch chamber in close thermal
- 28 coupling with the thermostatic switch.

1 2. A motor protector according to claim 1 in which the spring clip member
2 has a body portion formed with two opposite end portions and a centrally located
3 force applying portion, the opposite end portions of the clip member received
4 over respective tabs of a lid portion with the force applying portion engaging the
5 second face surface of the substrate to the contact shelves.

1 3. A motor protector according to claim 2 in which the end portions of the
2 spring clip member are bent into a generally V configuration with the body
3 portion, the V configuration adapted to receive therein a respective lid part tab.

1 4. A motor protector according to claim 3 in which each end portion of the
2 spring clip member has a free end and a locking tab is struck out from each end
3 portion so that it extends away from the free end and a lid part has a cut-out
4 formed in each lid tab defining a catch and a locking tab of the spring clip
5 member is receivable over a respective catch to lock the spring clip to the said lid
6 part.

1 5. A motor protector according to claim 1 further comprising sidewalls
2 extending from the contact shelves on either side of the ceramic substrate seat.

1 6. A motor protector according to claim 1 in which a stationary electrical
2 contact is mounted on the stationary contact portion of the first lid part.

1 7. A motor protector according to claim 1 in which the flange of the
2 housing has upper and lower face surfaces and the gasket has a bent over
3 portion for receipt on both face surfaces of the flange.

1 8. A motor protector according to claim 7 in which the bent over portions
2 of the gasket are formed with an extension for placement along the sidewall of
3 the housing.

1 9. A motor protector comprising an electrically conductive metal housing
2 having a bottom wall, opposed end walls and opposed sidewalls, forming a
3 switch chamber and having an open end, a flange extending laterally outwardly
4 from at least the opposed sidewalls,

5 an electrically insulative gasket received on the flange, the gasket
6 having extended side portions for folding over the flange, the gasket formed with
7 a cut-out central portion,

8 an electrically conductive metal lid comprising first and second
9 spaced apart parts, each lid part having a flange having flange receiving sections
10 lying in a plane and being configured for alignment with a respective flange of the
11 sidewalls, the flange receiving sections having tabs for clamping engagement
12 with a respective flange through the gasket, each lid part formed with a shelf
13 spaced from the plane in which the flange receiving section lie, the shelves being
14 spaced from the plane in a direction toward the bottom wall,

15 first and second terminals respectively extending from the metal
16 housing and one lid part,

17 a ceramic substrate having two opposed ends and having a face
18 surface, an electrically conductive contact disposed on the face surface at each
19 end of the opposed ends and a layer of resistive material disposed on the face
20 surface extending between and in electrically conductive relationship with the
21 electrically conductive contacts, the electrical contacts of the ceramic substrate
22 being received on the shelves in the switch chamber,

23 a spring clip having a force applying portion and opposed sides, the
24 opposed sides clampingly received over one of the lid portions with the force
25 applying portion engaging the ceramic substrate biasing the ceramic substrate
26 into electrical engagement with the shelves, and

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a heat responsive switch mounted in the switch chamber.